

BRUHATH BANGALORE MAHANAGARA PALIKE
EXECUTIVE ENGINEER, YELAHANKA DIVISION

Name of Work: Construction of Concrete Road and Drains at JPN Colony.

DETAILED ESTIMATE

						Estimated Cost:		100.00 Lakhs	
Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
	FOR DRAIN WORK								
1	Demolishing cement concrete manually/ by mechanical means including disposal of material to the appropriate disposal area as per direction of Engineer-in-charge. Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kankar/Moorum. (Tipper 10 m3) Cost of Haulage Excluding Loading and Unloading Case-1 : Surfaced Road Taking output 10 t load and lead 10 km = 100 t.km (KPWD SR 2023-24, Volume-II, Item No.19.2.1, Page No.187) (KPWD SR 2023-24, Volume-III, Item No.1.1 b, Page No.5) (KPWD SR 2023-24, Volume-III, Item No.1.4 a, Page No.5)								
		Cum							
	Existing Damaged RCC Drain								
	In JP Colony next to Escorts Compound								
			1	50.00	1.20	0.15	9.00		
			2	50.00	0.15	0.60	9.00		
	Cross Road-1 in AD Colony								
		B/s	2	16.50	0.75	0.15	3.71		
			4	16.50	0.15	0.45	4.46		
	Cross Road-2 in AD Colony								
		LHS	1	33.50	0.75	0.15	3.77		
			2	33.50	0.15	0.45	4.52		
		RHS	1	48.80	0.75	0.15	5.49		
			2	48.80	0.15	0.45	6.59		
						Total Quantity		46.54	2129.16
	Rate Analysis								
	Basic rate in Rs.	1663.00							
	Loading	119.00							
	Lead 1.28x10x12	153.60							
	Area Weitage @10%	193.56							
	Total Amount in Rs.	2129.16							
2	Removing and Refixing of Stone Slabs and Pointing in CM (1:3) Approved Rates								
		Sqm							
	JP Colony Main Road								
	Existing Drain		1	400.00	0.90		360.00		
	AD Colony Main Road								
	Existing Drain	B/s	2	268.00	0.75		402.00		
	Deduct 30% for Missing & damage						-228.60		
						Total Quantity		533.40	121.00
	Rate Analysis								
	Basic Rate	121.00							
	Total Amount	121.00							

Sr No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
3	Earth work excavation by manual means for drains, canals, waste weir draft, approach channels, key trench, foundation of Bridges and such similar works, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, excavated surface leveled and sides neatly dressed disposing off or leveling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage & other appurtenances required to complete the work. In ordinary / soft rock without blasting upto 1.5 m depth (KPWD SR 2023-24, Volume-I, Item No.1.5.1, Page No.6)								
	Cum								
	For RCC Drain								
	In JP Colony next to Escorts Compound								
			1	60.00	1.50	1.20	108.00		
			1	150.00	1.50	0.30	67.50		
	Cross Road-1 in AD Colony								
	B/s	2	16.50	0.85	0.45	12.62			
	Cross Road-2 in AD Colony								
	LHS	1	33.50	0.85	0.45	12.81			
	RHS	1	48.80	0.85	0.45	18.67			
	At Maramma bande								
		1	25.00	1.10	0.90	24.75			
	Manavarthi Thota (At Indra Canteen)								
		1	50.00	1.10	0.90	49.50			
	25th Cross Kondappa Layout from Ramesh house to Saraswathamma House								
		1	94.00	1.10	0.90	93.06			
	Culvert in AD Colony								
		2	4.00	1.05	0.60	5.04			
	At Maramma bande	2	5.50	1.20	0.90	11.88			
	Manavarthi Thota (At Indra Canteen)	2	5.50	1.20	0.90	11.88			
	Desilting of Drain								
	JP Colony Main Road	1	400.00	0.60	0.45	108.00			
	AD Colony Main Road	B/s	2	268.00	0.45	108.54			
	Total Quantity						632.25	328.90	207947.77
	Rate Analysis								
	Basic rate in Rs.	299.00							
	Area Weitage @10%	29.90							
	Total Amount in Rs.	328.90							
4	Providing and Filling in foundation with granite / trap broken metal 100mm. and down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specifications. (KPWD SR 2023-24, V-I, Item No.1.23, Page No.11)								
	Cum								
	For RCC Drain								
	In JP Colony next to Escorts Compound								
		1	150.00	1.50	0.30	67.50			
	Total Quantity						67.50	2950.20	199138.50
	Rate Analysis								
	Basic rate in Rs.	2682.00							
	Area Weitage @10%	268.20							
	Total Amount in Rs.	2950.20							

Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
5	Providing and laying in position plain cement concrete Mix 1:3:6 Using 40 mm nominal size graded crushed coarse aggregates for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (KPWD SR 2023-24, V-I, Item No.2.1.3, Page No.15)								
	Cum								
	For RCC Drain								
	In JP Colony next to Escorts Compound								
			1	60.00	1.50	0.15	13.50		
			1	150.00	1.50	0.15	33.75		
	Cross Road-1 in AD Colony								
	B/s	2	16.50	0.85	0.15	4.21			
	Cross Road-2 in AD Colony								
	LHS	1	33.50	0.85	0.15	4.27			
	RHS	1	48.80	0.85	0.15	6.22			
	At Maramma bande								
		1	25.00	1.10	0.15	4.13			
	Manavarthi Thota (At Indra Canteen)								
		1	50.00	1.10	0.15	8.25			
	25th Cross Kondappa Layout from Ramesh house to Saraswathamma House								
		1	94.00	1.10	0.15	15.51			
	Culvert in AD Colony								
		2	4.00	1.05	0.15	1.26			
	At Maramma bande	2	5.50	1.20	0.15	1.98			
	Manavarthi Thota (At Indra Canteen)	2	5.50	1.20	0.15	1.98			
	Total Quantity						95.06	6587.90	626217.78
	Rate Analysis								
	Basic rate in Rs.	5989.00							
	Area Weitage @10%	598.90							
	Total Amount in Rs.	6587.90							
6	Providing and laying in position Cement Concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates (KPWD SR 2023-24, V-I, Item No.2.4.3 Page No.16)								
	Cum								
	For RCC Drain								
	Raft								
	In JP Colony next to Escorts Compound								
		1	60.00	1.30	0.20	15.60			
		1	150.00	1.30	0.20	39.00			
	Cross Road-1 in AD Colony								
	B/s	2	16.50	0.65	0.15	3.22			
	Cross Road-2 in AD Colony								
	LHS	1	33.50	0.65	0.15	3.27			

Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
	RHS		1	48.80	0.65	0.15	4.76		
	At Maramma bande		1	25.00	0.90	0.15	3.38		
	Manavarthi Thota (At Indra Canteen)		1	50.00	0.90	0.15	6.75		
	25th Cross Kondappa Layout from Ramesh house to Saraswathamma House		1	94.00	0.90	0.15	12.69		
	Culvert in AD Colony		2	4.00	0.85	0.15	1.02		
	At Maramma bande		2	5.50	1.00	0.20	2.20		
	Manavarthi Thota (At Indra Canteen)		2	5.50	1.00	0.20	2.20		
	Wall								
	In JP Colony next to Escorts Compound		2	60.00	0.20	1.20	28.80		
			2	150.00	0.20	1.20	72.00		
	Cross Road-1 in AD Colony		4	16.50	0.10	0.45	2.97		
	B/s								
	Cross Road-2 in AD Colony		2	33.50	0.10	0.45	3.02		
	LHS		2	48.80	0.10	0.45	4.39		
	RHS		2	25.00	0.15	0.60	4.50		
	At Maramma bande		2	50.00	0.15	0.60	9.00		
	Manavarthi Thota (At Indra Canteen)		2	94.00	0.15	0.60	16.92		
	25th Cross Kondappa Layout from Ramesh house to Saraswathamma House		2	4.00	0.20	0.45	1.44		
	Culvert in AD Colony		4	5.50	0.20	0.60	2.64		
	At Maramma bande		4	5.50	0.20	0.60	2.64		
	Manavarthi Thota (At Indra Canteen)		4						
	Total Quantity						242.39	7318.08	1773856.85
	Rate Analysis								
	Basic rate in Rs.	6336.00							
	Form Work 5% for Cross Drains	316.80							
	Area Weightage @10%	665.28							
	Total Amount in Rs.	7318.08							
7	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping/welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification. All other type of structures (KPWD SR 2023-24, V-I, Item No.2.11(h), Page No.18)								
	Tonne								
	60Kgs for RCC Drain per Cum of Concrete			230.25		0.06	13.82		
	80Kgs for RCC Culverts per Cum of Concrete			12.14		0.08	0.97		
	Total Quantity						14.79	86912.10	1285119.25
	Rate Analysis								
	Basic Rate	79011.00							
	Area Weightage @10%	7901.10							
	Total Amount	86912.10							

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SJ No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
15	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m ³ in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately (KPWD SR 2023-24, Volume-III, Item No.2.19, Page No.12) Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kankar/Moorum. (Tipper 10 m ³) (KPWD SR 2023-24, Volume-III, Item No.1.1 b, Page No.5) Cost of Haulage Excluding Loading and Unloading Case-1 : Surfaced Road Taking output 10 t load and lead 10 km = 100 t.km (KPWD SR 2023-24, Volume-III, Item No.1.4 a, Page No.5)	Cum							
	Existing Damaged CC Road Cross Road-1 in AD Colony								
	Cross Road-2 in AD Colony		1	16.50	4.20	0.20	13.86		
			1	87.00	3.00	0.20	52.20		
						Total Quantity	66.06	788.26	52072.46
	Rate Analysis								
	Basic rate in Rs.	563.00							
	Lead 1.28x10x12	153.60							
	Area Weitage @10%	71.66							
	Total Amount in Rs.	788.26							
16	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead (KPWD SR 2023-24, Volume-III, Item No.3.5, Page No.17) Cost of Haulage Excluding Loading and Unloading Case-1 : Surfaced Road Taking output 10 t load and lead 10 km = 100 t.km (KPWD SR 2023-24, Volume-III, Item No.1.4 a, Page No.5)	Sqm							
	For Existingt Damaged BT Road AD Colony Main Road								
			1	268.00	3.60		964.80		
						Total Quantity	964.80	19.27	18593.63
	Rate Analysis								
	Basic rate in Rs.	6.00							
	Lead 1.28x10x12*0.075	11.52							
	Area Weitage @10%	1.75							
	Total Amount in Rs.	19.27							
17	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. (KPWD SR 2023-24, Volume-III, Item No.4.17, Page No.26)	Cum							
	For BT Road AD Colony Main Road								
			1	268.00	3.60	0.10	96.48		
						Total Quantity	96.48	2814.90	271581.55
	Rate Analysis								
	Basic rate in Rs.	2559.00							

Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
	Area Weitage @10%	255.90							
	Total Amount in Rs.	2814.90							
18	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70 kg/m ² using mechanical means. (KPWD SR 2023-24, Volume-III, Item No.5.1, Page No.31)								
		Sqm							
	For BT Road								
	AD Colony Main Road								
			1	268.00	3.60		964.80		
	Rate Analysis					Total Quantity	964.80	45.10	43512.48
	Basic rate in Rs.	41.00							
	Area Weitage @10%	4.10							
	Total Amount in Rs.	45.10							
19	Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction (KPWD SR 2023-24, Volume-III, Item No.5.8 c, Page No.32)								
		Cum							
	For BT Road								
	AD Colony Main Road								
			1	268.00	3.60	0.05	48.24		
						Total Quantity	48.24	8427.10	406523.30
	Rate Analysis								
	Basic rate in Rs.	7661.00							
	Area Weitage @10%	766.10							
	Total Amount in Rs.	8427.10							
20	Providing and applying tack coat with VG-10 Bitumen using pressure distributor at the rate of 0.20 kg/m ² on the prepared bituminous surface cleaned with mechanical broom (KPWD SR 2023-24, Volume-III, Item No.5.32, Page No.43)								
		Sqm							
	For BT Road								
	AD Colony Main Road								
			1	268.00	3.60		964.80		
						Total Quantity	964.80	13.20	12735.36
	Rate Analysis								
	Basic rate in Rs.	12.00							
	Area Weitage @10%	1.20							
	Total Amount in Rs.	13.20							
21	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (KPWD SR 2023-24, Volume-III, Item No.5.16 c, Page No.38)								
		Cum							

Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
	For BT Road								
	AD Colony Main Road								
			1	268.00	3.60	0.03	28.94		
	Rate Analysis					Total Quantity	28.94	12049.40	348757.83
	Basic rate in Rs.	10954.00							
	Area Weitage @10%	1095.40							
	Total Amount in Rs.	12049.40							
22	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015. The finished surface to be level, uniform and free from streaks and holes. (KPWD SR 2023-24, Volume-III, Item No.8.15, Page No.67)								
		Sqm							
	For BT Road								
	AD Colony Main Road								
			2	268.00	0.10		53.60		
						Total Quantity	53.60	583.00	31248.80
	Rate Analysis								
	Basic rate in Rs.	530.00							
	Area Weitage @10%	53.00							
	Total Amount in Rs.	583.00							
23	Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 14:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 140 kg/ m3 , optimum moisture content to be determined during trial length construction, concrete strength not to be less than 7 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 t vibratory roller, finishing and curing. (KPWD SR 2023-24, Volume-III, Item No.6.1, Page No.49)								
		Cum							
	For CC Road								
	Cross Road-1 in AD Colony								
			1	16.50	4.50	0.10	7.43		
	Cross Road-2 in AD Colony								
			1	87.00	3.20	0.10	27.84		
						Total Quantity	35.27	5412.00	190854.18
	Rate Analysis								
	Basic rate in Rs.	4920.00							
	Area Weitage @10%	492.00							
	Total Amount in Rs.	5412.00							

Sl No	Description of Work	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs.	Amount in Rs.
24	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383:2016, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, primer, sealant, curing of concrete slabs for 14-days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete. as per the directions of the Engineer-in-charge of the work. (KPWD SR 2023-24, Volume-III, Item No.16.28, Page No.149)								
		Cum							
	For CC Road								
	Cross Road-1 in AD Colony					0.15	11.14		
	Cross Road-2 in AD Colony		1	87.00	3.20	0.15	41.76		
	Total Quantity						52.90	7429.40	392996.69
	Rate Analysis								
	Basic rate in Rs.	6754.00							
	Area Weitage @10%	675.40							
	Total Amount in Rs.	7429.40							
	Construction Total Amount								
								8472478.00	
								Add 18% for GST Charges	1525046.00
								Sub Total	9997524.00
								Miscellaneous and unforeseen charges etc.L.S	2476.00
								Grand Total Amount	1,00,00,000.00

Certificate:

1. The work spot has been inspected and found to be necessary
2. The provisions made in the estimate are necessary and minimum
3. The estimate is based on CSR of PWD 2023-24

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